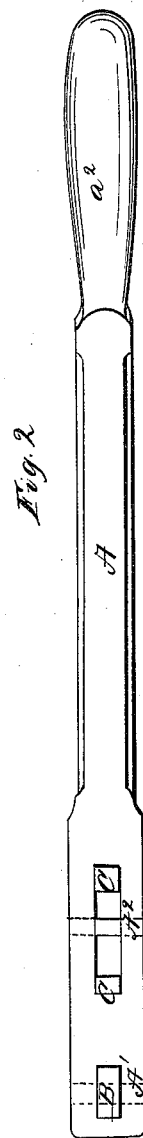
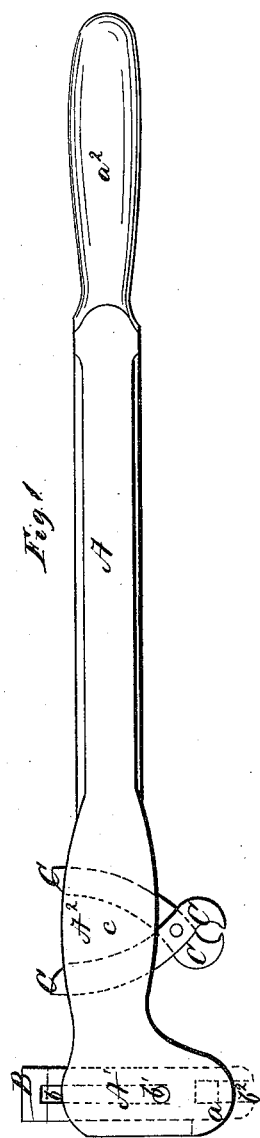


*J. H. Hogan,*  
*Nail Extractor,*  
*No. 55,105, Patented May 29, 1866.*



*Witnesses*

*J. W. Kermel*  
*M. Randolph*

*Inventor*

*J. H. Hogan*

# UNITED STATES PATENT OFFICE.

J. H. HOGAN, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN NAIL-EXTRACTORS.

Specification forming part of Letters Patent No. 55,105, dated May 29, 1866.

*To all whom it may concern:*

Be it known that I, J. H. HOGAN, of the city and county of St. Louis, and State of Missouri, have invented a new Nail-Extractor, or instrument for drawing nails out of boxes and for other uses; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings.

Figure 1 of the drawings represents a side elevation of the machine, and Fig. 2 is a plan of it.

To enable those skilled in the art to make and use my nail-extractor, I will proceed to describe its construction and operation.

It consists of a handle, A, made of cast-iron, the said handle being perforated by mortises at A' and A<sup>2</sup>. The mortise A' is near the forward end of the lever, which at that point is made wider than any other part of it by the addition of the metal lug a, which forms a fulcrum for the handle or lever, as will be hereinafter more fully explained. There is a hard metal slide, B, fitted into the mortise A', so it can slide easily up and down. There is a slot, b, in this slide, through which the rivet b' passes in such a manner as to hold it in the handle, but still to permit the slide to move up or down. There is also in the lower end of the slide a notch or groove, b<sup>2</sup>, as shown clearly by the red lines in Fig. 1, which represent the slide when it is down. The lower corners of the slide should be rounded or beveled off, as shown in Fig. 1, so they can be readily driven into the wood, for which purpose they are designed.

The mortise A<sup>2</sup> is made largest on top and smallest on the bottom, as clearly shown in Fig. 1. There is a pair of nippers, C, fitted

into this mortise, and held from slipping out by the pin c, which, however, permits the nippers to move up or down a little.

When the machine or instrument is to be used, it is placed so the notch or slot in the lower end of the slide will come over the nail to be operated upon. A smart blow of a hammer is then to be given to the upper end of the slide, and an indentation in the wood on each side of the nail will be the result of the operation. The position of the instrument must then be changed, so that the teeth of the nippers will embrace the head of the nail and the lug a will rest on the piece in which the nail is driven. Power will then be applied to the handle a<sup>2</sup> to raise it up, when it is evident the nippers will grasp the nail tight enough, by means of the handles of them sliding down in the mortise A<sup>2</sup>, to draw out any nail.

By increasing the size of the implement it might be made to take the place of the shackle-bar used at present for drawing spikes on railroads, bridge-building, &c. The advantage of it consists in the safety attending its use, as both the nail or spike and the article from which the same is drawn are uninjured by the operation.

I prefer to make the slide B and the nippers C of steel, but this is by no means absolutely necessary.

What I claim is—

The combination of the handle A, the slide B, and the nippers C, substantially as described and set forth.

JNO. H. HOGAN

Witnesses:

M. RANDOLPH,  
HENRY W. KRAATZ.